UNITED STATES PATENT AND TRADEMARK OFFICE

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09/878,272	06/12/2001	Yoshinori Tanaka	011350-275	3124

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EXAMINER
MILIA, MARK R

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 March 2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5 and 7-33_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5 and 7-33_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment was received on 3/30/05, and has been entered and

made of record. Currently, claims 1-5 and 7-33 are pending.

Claim Objections

2.   The amendment to claim 4 to add a period has overcome the objection to the

claim. Therefore, the objection has been withdrawn.

Response to Arguments

3.   Applicant's arguments filed 3/30/05 have been fully considered but they are not

persuasive. Upon review of the references of Outa, Kinjo, and Arakawa regarding the

rejection of claims 1-4, 10, 12-14, 17, and 18, more specifically claims 1, 14, 17, and 18,

the examiner notes that the references can still be interpreted as disclosing the claim

limitations, as currently amended.

In response to applicant's arguments regarding the rejection of claim 6, which

has currently been canceled and the limitation added to that of claim 1, wherein on page

12, the applicant asserts that the reference of Arakawa does not disclose the detection

of information concerning the color of a line graphic. The examiner respectfully

disagrees with the applicant as the reference of Arakawa does disclose such a feature.

Particularly, Arakawa states in paragraph [0010] that a border-line data is extracted

from a color graphic and the extracted border-line data is then converted to vector data.

The border-line data must contain information regarding the color of the line to

accurately reproduce the color graphic pattern as described in paragraphs [0017]-

[0018]. Further the reference of Arakawa was used in combination with that of Outa

and Kinjo to show that it would have been obvious to one of ordinary skill in the art at

the time the invention was made to extract the color of both the graphic line that

encloses an area (i.e. a border) and to extract the color of the enclosed area itself to

accurately reproduce and output a graphic image.

In response to applicant's arguments regarding the rejection of claims 9 and 16,

wherein on page 13, the applicant asserts that the reference of Iijima does not disclose

generation of a vector according to a comparison of a line width of a line graphic. The

reference of Iijima was used in combination with that of Outa and Kinjo to show that it

would have been obvious to one of ordinary skill in the art at the time the invention was

made to compare line widths of line graphics in generation of vector data. Iijima

discloses the comparison of line width and thickness with predetermined values of

"thin", "medium", and "thick" (see column 7 lines 10-25 and column 7 line 44-column 8

line 3).

Therefore, the rejection of claims 1-5 and 7-18 are maintained. Newly added

claims 19-33 will be addressed in the following rejection.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 10, 12-14, and 17-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 5293469 to Outa et al. in view of U.S. Patent No.

5629752 to Kinjo et al. and further in view of Japanese Patent Document No. 06-

195421 to Arakawa as cited on Information Disclosure Statement dated September 28,

2001.

Regarding claim 1, Outa discloses an image-processing apparatus comprising: a

memory that stores raster data obtained by scanning graphic image (see column 3 lines

53-62), a processor connected to said memory (see Fig. 1 and column 3 line 63-column

4 line 18), wherein said processor extracts line graphics based on the raster data (see

column 3 line 53-column 4 line 36), said processor generates vector data along the

extracted line graphics (see column 3 line 63-column 4 line 36), said processor detects

information concerning line widths of the extracted line graphics (see column 2 lines 22-

31 and column 7 lines 32-33), and said processor extracts an enclosed area surrounded

by the extracted line graphics (see column 3 line 63-column 4 line 36).

Outa does not disclose expressly wherein said processor detects information concerning a color within the extracted enclosed area.

Kinjo discloses wherein said processor detects information concerning a color within the extracted enclosed area (see column 16 line 54-column 17 line 17, column 20 line 47-column 21 line 12, column 23 lines 8-16, column 30 line 10-column 31 line 22, column 38 lines 47-65, and column 39 lines 20-35).

Outa and Kinjo do not disclose expressly wherein said processor detects second information concerning a color of the line graphics.

Arakawa discloses wherein said processor detects second information concerning a color of the line graphics (see English translation of the abstract and paragraphs [0010], [0017]-[0018], and [0022]).

Outa, Kinjo, & Arakawa are combinable because they are from the same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of detecting a color inside of a given shape as discussed by Kinjo and the detection of a color of a line graphic of Arakawa with the system of Outa.

The suggestion/motivation for doing so would have been provide the ability to ascertain the color inside of a graphic object as well as the color of the lines that outline the object to allow the color inside and the color of the border-line graphics to be detected for accurate reproduction. Ascertaining the color can be useful as discussed by Kinjo to automatically detect a human face by the distribution and amount of a

certain color that is present in a particular image, which has many advantages in the area of face-recognition.

Therefore, it would have been obvious to combine Kinjo and Arakawa with Outa to obtain the invention as specified in claim 1.

Regarding claims 13 and 17, Outa discloses an image-processing method and a computer readable medium containing a program product comprising the steps of: receiving raster data obtained by scanning graphic image (see column 3 lines 53-62), extracting line graphics based on the raster data; generating vector data along the extracted line graphics (see column 3 line 63-column 4 line 18), detecting information concerning line widths of the extracted line graphics (see column 2 lines 22-66 and column 7 lines 32-33), and extracting an enclosed area surrounded by the extracted line graphics (see column 4 lines 10-36).

Outa does not disclose expressly detecting information concerning a color within the extracted enclosed area.

Kinjo discloses detecting information concerning a color within the extracted enclosed area (see column 16 line 54-column 17 line 17, column 20 line 47-column 21 line 12, column 23 lines 8-16, column 30 line 10-column 31 line 22, column 38 lines 47-65, and column 39 lines 20-35).

Outa and Kinjo do not disclose expressly wherein said processor detects second information concerning a color of the line graphics.

Arakawa discloses wherein said processor detects second information concerning a color of the line graphics (see English translation of the abstract and paragraphs [0010], [0017]-[0018], and [0022]).

Outa, Kinjo, & Arakawa are combinable because they are from the same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of detecting a color inside of a given shape as discussed by Kinjo and the detection of a color of a line graphic of Arakawa with the system of Outa.

The suggestion/motivation for doing so would have been provide the ability to ascertain the color inside of a graphic object as well as the color of the lines that outline the object to allow the color inside and the color of the border-line graphics to be detected for accurate reproduction. Ascertaining the color can be useful as discussed by Kinjo to automatically detect a human face by the distribution and amount of a certain color that is present in a particular image, which has many advantages in the area of face-recognition.

Therefore, it would have been obvious to combine Kinjo and Arakawa with Outa to obtain the invention as specified in claims 13 and 17.

Regarding claims 14 and 18, Outa discloses an image-processing method and a computer readable medium containing a program product comprising the steps of: receiving raster data obtained by scanning graphic image (see column 3 lines 53-62),

extracting line graphics based on the raster data, generating vector data along the extracted line graphics; detecting information concerning line widths and a color within the extracted line graphics (see column 3 line 63-column 4 line 36), extracting an enclosed area surrounded by the extracted line graphics (see column 4 lines 10-36), and storing said vector data, information color within the concerning the line widths and the color of the line graphics (see column 3 line 63-column 4 line 36, column 4 lines 56-61, and column 7 lines 32-33 and 47-54).

Outa does not disclose expressly detecting information concerning a color within the extracted enclosed area.

Kinjo discloses detecting information concerning a color within the extracted enclosed area (see column 16 line 54-column 17 line 17, column 20 line 47-column 21 line 12, column 23 lines 8-16, column 30 line 10-column 31 line 22, column 38 lines 47-65, and column 39 lines 20-35).

Outa and Kinjo do not disclose expressly wherein said processor detects second information concerning a color of the line graphics.

Arakawa discloses wherein said processor detects second information concerning a color of the line graphics (see English translation of the abstract and paragraphs [0010], [0017]-[0018], and [0022]).

Outa, Kinjo, & Arakawa are combinable because they are from the same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of detecting a color inside of a given shape as

discussed by Kinjo and the detection of a color of a line graphic of Arakawa with the system of Outa.

The suggestion/motivation for doing so would have been provide the ability to ascertain the color inside of a graphic object as well as the color of the lines that outline the object to allow the color inside and the color of the border-line graphics to be detected for accurate reproduction. Ascertaining the color can be useful as discussed by Kinjo to automatically detect a human face by the distribution and amount of a certain color that is present in a particular image, which has many advantages in the area of face-recognition.

Therefore, it would have been obvious to combine Kinjo and Arakawa with Outa to obtain the invention as specified in claims 14 and 18.

Regarding claims 19, 24, and 29, Outa discloses an image processing apparatus, method, and computer readable medium having a computer program comprising: a processor for generating a set of data from raster image data including line graphics that form an area surrounded by the line graphics, the set of data including (1) vector data tracing the line graphics (see column 3 line 63-column 4 line 36) and (2) information on line widths of the line graphics (see column 2 lines 22-31 and column 7 lines 32-33).

Outa does not disclose expressly (3) information on a first color of the line graphics, and (4) information on a second color of the enclosed area.

Kinjo discloses (4) information on a second color of the enclosed area (see column 16 line 54-column 17 line 17, column 20 line 47-column 21 line 12, column 23 lines 8-16, column 30 line 10-column 31 line 22, column 38 lines 47-65, and column 39 lines 20-35).

Kinjo does not disclose expressly (3) information on a first color of the line graphics.

Arakawa discloses (3) information on a first color of the line graphics (see English translation of the abstract and paragraphs [0010], [0017]-[0018], and [0022]).

Outa, Kinjo, & Arakawa are combinable because they are from the same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of detecting a color inside of a given shape as discussed by Kinjo and the detection of a color of a line graphic of Arakawa with the system of Outa.

The suggestion/motivation for doing so would have been provide the ability to ascertain the color inside of a graphic object as well as the color of the lines that outline the object to allow the color inside and the color of the border-line graphics to be detected for accurate reproduction. Ascertaining the color can be useful as discussed by Kinjo to automatically detect a human face by the distribution and amount of a certain color that is present in a particular image, which has many advantages in the area of face-recognition.

Therefore, it would have been obvious to combine Kinjo and Arakawa with Outa to obtain the invention as specified in claims 19, 24, and 29.

Regarding claim 2, Outa, Kinjo, and Arakawa disclose the system discussed in claim 1, and Outa further discloses a storage unit that stores said vector data and said information concerning the color within the enclosed area (see column 4 lines 56-61, reference shows that all pertinent data pertaining to the vector data is stored in memory and therefore the combination of Outa and Kinjo would store the information relating to the color within the enclosed area of the vector data).

Regarding claim 3, Outa, Kinjo, and Arakawa disclose the system discussed in claims 1 and 2, and Outa further discloses wherein said storage unit further stores said information concerning the line widths (see column 2 lines 22-66 and column 7 lines 32-33 and 47-54).

Regarding claims 4, 20, 25, and 30, Outa, Kinjo, and Arakawa disclose the system discussed in claims 1, 19, 27, and 29, and Kinjo further discloses wherein said processor selects multiple internal points within the extracted enclosed area and detects the color within the extracted enclosed areas based on color information of the multiple internal points (see column 16 line 54-column 17 line 17, column 20 line 47-column 21 line 12, column 23 lines 8-16, column 30 line 10-column 31 line 22, column 38 lines 47-65, and column 39 lines 20-35).

Regarding claim 10, Outa, Kinjo, and Arakawa disclose the system discussed in claim 1, and Outa further discloses wherein said image processing apparatus is built

into a scanner (see column 3 lines 51-62, reference teaches the system of converting raster data to vector data being located in a digital copy machine which has both a scanner and printer therefore teaches the above claimed limitation).

Regarding claim 12, Outa, Kinjo, and Arakawa disclose the system discussed in claim 1, and Outa further discloses wherein said image processing apparatus is built into a printer (see column 3 lines 51-62, reference teaches the system of converting raster data to vector data being located in a digital copy machine which has both a scanner and printer therefore teaches the above claimed limitation).

Regarding claim 6, Outa, Kinjo, and Arakawa disclose the system discussed in claim 1, and Arakawa further discloses wherein said processor further detects information concerning a color of line graphics (see paragraphs [0010], [0017]-[0018], and [0022]).

Regarding claim 7, Outa, Kinjo, and Arakawa disclose the system discussed in claim 2, and Arakawa further discloses wherein said processor further detects concerning a color of line graphic, and information said storage unit further stores information concerning the color of said line graphics (see paragraphs [0010], [0017]-[0018], and [0022]).

Regarding claims 8, 15, 22, 27, and 32, Outa, Kinjo, and Arakawa disclose the system discussed in claims 1, 14, 19, 24, and 29, and Arakawa further discloses wherein said vector data are generated by converting the line graphics into core line graphics (see Drawings 5 and 7).

Regarding claim 11, Outa, Kinjo, and Arakawa disclose the system discussed in claim 1, and Arakawa further discloses wherein said image processing apparatus is built into a server that provides image-processing services (see Drawing 1 and paragraph [0014]).

Claims 5, 21, 26, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Outa, Kinjo, and Arakawa as applied to claims 1, 20, 25, and 30 above, and further in view of U.S. Patent No. 6469805 to Behlok.

Outa, Kinjo, and Arakawa do not disclose expressly wherein according to the said processor generates a histogram of the color information of the multiple internal points and executes statistical processes based on the histogram to detect color within the extracted enclosed area.

Behlok discloses wherein according to the said processor generates a histogram of the color information of the multiple internal points and executes statistical processes based on the histogram to detect color within the extracted enclosed area (see column 5 lines 36-39 and column 6 lines 46-67).

Outa, Kinjo, Arakawa, & Behlok are combinable because they are from the same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the use of histograms for color detection of Behlok with the system of Outa, Kinjo, and Arakawa.

The suggestion/motivation for doing so would have been provide a more

accurate color and modification detection system (see also column 4 lines 12-25 of

Behlok).

Therefore, it would have been obvious to combine Behlok with Outa, Kinjo, and

Arakawa to obtain the invention as specified in claims 5, 21, 26, and 31.

Claims 9, 16, 23, 28, and 33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Outa and Kinjo as applied to claims 1, 14, 19, 24, and 29 above, and

further in view of U.S. Patent No. 5845304 to Iijima.

Outa, Kinjo, and Arakawa do not disclose expressly wherein said processor

compares the line widths of the line graphics with a specified threshold value and

generates said vector data according to comparison results.

Iijima discloses wherein said processor compares the line widths of the line

graphics with a specified threshold value and generates said vector data according to

comparison results (see column 4 lines 14-36 and 52-65, column 7 lines 10-25, and

column 7 line 44-column 8 line 3, reference discloses a method for determining the

thickness of a line contained in a digital document by comparing the line to known

values of lines that are thin, medium thickness, or thick and being able to change

thickness along with color for future processing and reproduction).

Outa, Kinjo, and Arakawa, & Iijima are combinable because they are from the

same field of endeavor, manipulation of graphic images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the thickness and alteration method of Iijima with the system of Outa, Kinjo, and Arakawa.

The suggestion/motivation for doing so would have been to allow a user to alter the thickness of a line graphic to allow the image to be scaled up or down without having the line graphic become too large or too small.

Therefore, it would have been obvious to combine Iijima with Outa, Kinjo, and Arakawa to obtain the invention as specified in claims 9, 16, 23, 28, and 33.

Conclusion

5.   Applicant's amendment necessitated the rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mark R. Milia whose telephone number is (571) 272-

7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Coles can be reached at (571) 272-7402. The fax number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Mark R. Milia
Examiner
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MRM

Joseph R. Pokrzywa
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